

Household Food Safety Awareness of Female University Workers in South East Nigeria

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Abstract

This study is aimed at exploring the awareness of household food safety among female University workers in South East Nigeria. Specifically the study identified the food safety knowledge, attitude/ perception to food safety issues, food purchasing, food handling and preparation practices among female university workers and ways of improving household food safety practices. The descriptive survey design was employed. A structured questionnaire was used to collect data from a sample of four hundred and ninety female university workers obtained from a total population of two thousand four hundred and fifty females working in the five federal universities in the south east zone of Nigeria. Frequency and mean were used to analyze the data obtained from the questionnaire. The study revealed that the female university workers have some adequate knowledge about food safety practices. However, more than half of the respondents were not aware of the role of temperature control as a means of reducing the risk of food borne illnesses. It is suggested that public health education program be designed to enhance household safety awareness.

Keywords: Food Safety, Household, Awareness, Female University Workers.

1. Introduction

Food is said to be safe or wholesome if it is free not only from toxins, chemical and physical contaminants but also from microbial pathogens such as bacteria, parasites and viruses. Contaminations of food otherwise known as food poisoning lead to many human diseases and affect the body's proper function. Food contamination/poisoning are chiefly caused by harmful bacteria like *Campylobacter*, *Salmonellas* and *Escherichia Coli* (*E. Coli*) responsible for most food related illnesses, hospitalization and death (Eley, 1996). *Campylobacter*, is the most common bacterial cause of diarrhea, and can be caused by undercooked chicken or other food contaminated with juices that drip from raw chicken. *Salmonella* is a bacterium that can spread from food of animal origin. Symptoms include fever, diarrhea, abdominal cramps which can become serious in some individuals. *E coli* are a bacterium that resides in cattle and similar animals. Humans usually infected from consuming food or water that has been contaminated with small amount of cow waste. Most other causes of food poisoning from bacteria include viruses, parasites, toxins and all food contaminants. Some serious long term effects associated with several common types of food poisoning include kidney failure, chronic arthritis, brain nerve damage and death. All are at risk but certain groups of people are more susceptible and suffer serious consequences from food borne diseases like pregnant women, older adults, children and persons with chronic diseases. WHO (1999), revealed that each year 1.8 million people all over the world including women and children die as a result of diarrhea attributed to contaminated food and water. Food-borne diarrhea remains one of the most common illnesses of children and one of the major causes of infant and children mortality in developing countries. However, the adverse effects which exist by consumption of contaminated foods can only be controlled with food safety practices. Forgetting about food safety is a recipe for disaster.

Food safety is a term describing handling, preparation and storage of food in ways that prevent food borne illnesses. These include according to Food Safety Services (FSS, 2009) a number of routines that should be followed to avoid severe health hazards. Vanguard (2005), disclosed that food safety is the utilization of various resources and strategies to ensure that all types of foods are properly stored, prepared, and preserved so they are safe for consumption. Practicing this level of food sanitation include the proper storage of leftovers for future use. According to World Health Organization (2000), food safety is the degree of confidence that food will not cause sickness or harm to the consumers when it is prepared, served and eaten according to its intended use.

Food safety awareness is important to all that handle and eat food. It is therefore the responsibility of government, food industries and consumers who prepare and eat food in their homes to employ measures to keep food safe. In Nigeria, food safety are monitored by agencies such as the National Agency for food and Drug Administration and Control (NAFDAC), the Standards Organization of Nigeria, the National Primary Healthcare Development Agency and some International Agencies like Food and Agricultural Organization (FAO), World Health Organization (WHO) among others. These agencies, among other responsibilities, establish standards and codes of hygienic practices for food and food products, formulate national policies on food safety, and control food borne diseases as well as other national and international matters relating to food.

The national food safety system in Africa highlighted some constraints hindering the proper implementation of

the food agency policies as inadequate and uncoordinated food hygiene and safety control system, inadequate infrastructural facilities for enforcement and emergency response, insufficient financial provisions which contributed to the present situation of inadequate food, poor hygiene, questionable food safety, and food security in the country. Different levels for regulation of food safety have been identified as Global, National, Industrial and Household (FSS, 2009). These represent the levels at which food safety can be controlled. This study will however concentrate on household food safety.

Household food safety is that part of food safety which individuals can monitor and control within the home. Presently, there is no regulation for the preparation, handling, and storage of food in homes hence household food safety is controlled through the education of women. It is very important that females, in this case female university workers who have the primary responsibilities of purchasing, storage and preparation of food in the home should be well informed about the possible health hazards presented in the food they consume. Awareness therefore has to do with people's knowledge and behavior relating to household food safety. These include food handling practices, purchasing behavior, with respect to food safety and food safety knowledge.

Unsafe food practices is an important cause of reduced economic productivity, pain, suffering, increased medical bills costs, income loss (due to absence from work) and reduced individual productivity (WHO, 1999). Food handling practices are presently of public concern, and action is required to reduce the likelihood of home-derived food borne diseases. Since females are generally in charge of food/feeding in the home, what are the food handling practices of female university workers in south east Nigeria?

The outbreak of food borne illnesses are primarily the result of unsafe food practices, therefore female university workers should be made to view wrong practices as direct threat to health. They should take particular note of food safety of infants and young children who are particularly vulnerable to food safety threat. Food handling practices like cooking food to appropriate temperature in order to kill microorganisms, maintaining the right temperature for freezing, hygienic handling of foods, separation of raw and cooked foods; purchasing of food from clean places and access to clean water would contribute greatly to ensuring food safety in the home.

Food is the major source of human exposure to pathogenic agents, from which no individual is spared. Thousands of people die every year as a result of food poisoning and hospitals are filled with more patients suffering from food and water borne diseases than from other causes of illness.

1.1 Research Questions

The following research questions guided the study.

1. What is the food safety knowledge of female university workers in South East Nigeria?
2. What are the attitude/perception/ of female university workers to food safety issues?
3. What are the food purchasing practices of female university workers in south east?
4. What are the food handling and preparation practices of female university workers?
5. In what ways can household food safety practices of the female university workers be improved?

2. Research Method

The study adopted the descriptive survey research design because it used structured questions given to a representative sample of respondents to measure their opinions, beliefs, values or tendency to act (Ezeh, 1999). The study, therefore as a descriptive survey sought to obtain and describe food handling practices of female university workers in South East Nigeria.

The sample consists of 490 female university workers drawn from a population of 2450 female university workers in the South East. The sampling represented 20% of the population. Disproportionate stratified random sampling technique was used to get representative sample from all the five federal universities in the South East. Eighty five (85) item structured questionnaire was used to elicit responses from respondents for answering the research questions. Questionnaire items 1-15 were structured with Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D) response options to elicit responses for answering research question one, items 16-27 were designed also with Strongly Agree (SA), Agree (A), Strongly Disagree (SD) and Disagree (D) to elicit responses for answering research question two, items 28 -40 were designed with the same response options and 2.50 cutoff point to elicit responses for answering research question three, while items 41-64 and items 65-85 were structured with options Always (AL), Often (OF), Occasionally (OC) and Never (NE) for answering research question four and five respectively. Limit of real number was used to interpret the responses. Response range 4.00 -3.00 represent AL, 2.99 – 2.00 represents OF, 1.99 – 1.00 represent OC, 0.99 – 0.00 stands for NE.

A total of 490 copies of the questionnaire were distributed by the researchers and the same copies of distributed questionnaire were collected back, with the help of two research assistants. Ten respondents were randomly interviewed, guided by the questionnaire items, to provide qualitative data.

Frequencies and Mean (X) were used to analyze the data collected.

3. Results of the study

The results of data analysis are presented and interpreted according to the research questions guiding the study.

Research Question One

What is the food safety knowledge of female university workers in South East Nigeria?

Table 1: Food safety knowledge of female university workers

| S/N | ITEM | SA | A | SD | D | \bar{X} | Remarks |
|-----|---|-----|-----|-----|-----|-----------|----------|
| 1 | It is ok to thaw meat on the counter | 210 | 214 | 38 | 28 | 3.26 | Agree |
| 2 | Clearing kitchen with bleach kills bacteria | 191 | 204 | 48 | 47 | 3.11 | Agree |
| 3 | I don't need to wash fruits or vegetables if am going to peel them | 98 | 178 | 150 | 70 | 2.61 | Agree |
| 4 | Left over are safe to eat until they smell bad | 94 | 216 | 80 | 100 | 2.61 | Agree |
| 5 | Food borne illnesses are minor and temporary | 85 | 205 | 70 | 130 | 2.58 | Agree |
| 6 | Washing meat, poultry and sea food will rid them of bacteria | 60 | 100 | 245 | 85 | 2.28 | Disagree |
| 7 | Washing fruits and veggies with detergents will rid them of contaminants. | 85 | 225 | 90 | 90 | 2.61 | Agree |
| 8 | Thawing or marinating food on the kitchen counter is ok | 180 | 130 | 85 | 95 | 2.83 | Agree |
| 9 | Diarrhea, stomach pains, typhoid fever, vomiting are symptoms of food borne diseases, | 235 | 155 | 30 | 70 | 3.13 | Agree |
| 10 | Refrigerate perishable food immediately (not more than an hour. | 50 | 110 | 255 | 75 | 2.28 | Disagree |
| 11 | Infants and young children are more vulnerable to food safety threats | 92 | 178 | 150 | 70 | 2.61 | Agree |
| 12 | Cooking destroys food nutrients and should be discouraged | 200 | 110 | 90 | 90 | 2.83 | Agree |
| 13 | Food must be stored under freezing temperature | 85 | 120 | 190 | 95 | 2.40 | Disagree |
| 14 | Cooked food must be kept away from raw food | 225 | 180 | 40 | 45 | 3.18 | Agree |
| 15 | Raw eggs are healthy and very nutritious | 85 | 205 | 25 | 53 | 3.17 | Agree |

Table 1 shows the mean response of the respondents on food safety knowledge of female university workers. The respondents agreed positively on items 1,2,3,4,5,7,8,9,11,12,14,15, and 16 respectively since where their mean score were higher than the 2.50 cutoff points. They however disagree to items 6, 10, and 13 as depicted by the mean scores of less than 2.50.

Research Question Two

What are the attitude/perception/ of female university workers to food safety issues?

Table 2: Attitude/perception of female university workers to food safety issues

| S/N | ITEM | SA | A | SD | D | \bar{X} | Remarks |
|-----|--|-----|-----|------|-----|-----------|----------|
| 16 | Report food borne illness to chemist instead of medical doctor for treatment and advice. | 60 | 155 | 195 | 80 | 2.41 | Disagree |
| 17 | Untreated water tank or pond should be considered very bad source for drinking water | 325 | 145 | 10 | 10 | 3.60 | Agree |
| 18 | Consumers have a right to insist on safe food. | 230 | 175 | 30 | 55 | 3.18 | Agree |
| 19 | Egg is better consumed raw. | 20 | 55 | 270 | 145 | 1.90 | Disagree |
| 20 | It is impossible to avoid risks associated with food safety. | 80 | 125 | 200 | 85 | 2.40 | Disagree |
| 21 | Everything we eat these days are dangerous | 20 | 70 | 250 | 150 | 1.92 | Disagree |
| 22 | I try not to think how safe or unsafe a food is. | 35 | 50 | 210 | 195 | 1.85 | Disagree |
| 23 | There is little or nothing one can do about food safety. | 15 | 55 | 265 | 155 | 1.86 | Disagree |
| 24 | I trust the government to take necessary action to ensure safe food supply. | 190 | 120 | 85 | 95 | 2.83 | Agree |
| 25 | I eat meat/chicken/fish/akara balls or any food that is exposed at road side | 0 | 30 | 1.15 | 345 | 1.36 | Disagree |
| 26 | Spoilt food items should be properly disposed | 225 | 200 | 50 | 15 | 3.30 | Agree |
| 27 | There is need to always consider the safety of food for storage | 260 | 215 | 10 | 5 | 3.49 | Agree |

Table 2: shows the mean responses of respondents to attitude/perception of female university workers on food safety issues.

The respondents answered positively on the issues represented by items 17, 18, 24, 26, and 27, due to fact that their mean response was higher than 2.50. Whereas they disagreed with the issues represented by items 16, 19, 20, 21, 22, 23 and 25 were their mean scores were less than the cutoff point of 2.50.

Research Question Three

What are the food purchasing practices of female university workers in south east?

Table 3: Food purchasing practices of female university workers

| S/N | ITEM | SA | A | SD | D | \bar{X} | Remarks |
|-----|--|-----|-----|-----|-----|-----------|---------|
| 28 | Food purchasing is an important preliminary step in ensuring a safe food supply within the home. | 195 | 260 | 15 | 20 | 3.29 | Agree |
| 29 | Consider market environment where food items are displayed and sold. | 220 | 185 | 50 | 35 | 3.20 | Agree |
| 30 | Check the cleanliness of seller before purchasing food. | 240 | 225 | 15 | 10 | 3.42 | Agree |
| 31 | Purchase food stuffs based on its quality instead of quantity. | 365 | 100 | 10 | 15 | 3.66 | Agree |
| 32 | Check expiring date of food items before purchasing | 395 | 65 | 20 | 10 | 3.72 | Agree |
| 33 | Patronize ready-to-eat foods that are not exposed to flies, dust. | 245 | 190 | 30 | 25 | 3.34 | Agree |
| 34 | Check for foul odour and discolouration prior to purchase | 265 | 195 | 15 | 15 | 3.45 | Agree |
| 35 | Do not purchase frozen fish/chickens/meat thawed at ambient/room temperature. | 95 | 195 | 100 | 100 | 2.58 | Agree |
| 36 | Reject any food when in doubt of the safety. | 260 | 195 | 10 | 25 | 3.40 | Agree |
| 37 | Discontinue buying certain food items because of food safety concerns. | 95 | 175 | 155 | 65 | 2.61 | Agree |
| 38 | Buy foods that are in good condition (tomatoes, pepper) | 305 | 170 | 5 | 10 | 3.57 | Agree |
| 39 | Purchase ready to eat food that are not exposed (bread, plantain etc) | 195 | 200 | 50 | 45 | 3.11 | Agree |
| 40 | Food can be bought from anywhere since it will be cooked | 210 | 195 | 10 | 75 | 3.18 | Agree |

Table 3: shows the mean response of respondents to food purchasing practices. They responded positively to all the items from items 28 to 40 since the mean scores were above the cutoff point of 2.50.

Research Question Four

What are the food handling and preparation practices of female university workers?

Table 4: Food handling and preparation practices

| S/N | ITEM | AL | OF | OCC | NE | \bar{X} | Remarks |
|-----|--|-----|-----|-----|-----|-----------|--------------|
| 41 | Prepare or wash foods with dirty or used water. | 15 | 5 | 15 | 455 | 1.14 | Occasionally |
| 42 | Use the same cutting board for meat/chicken/fish etc. | 40 | 55 | 235 | 160 | 1.95 | Occasionally |
| 43 | Eat groundnut, garden egg, or any food without washing hands. | 0 | 5 | 100 | 385 | 1.22 | Occasionally |
| 44 | Allow food to cool and thaw at room temperature | 10 | 40 | 135 | 305 | 1.50 | Occasionally |
| 45 | Allow 2 hours between preparation and eating of food. | 80 | 110 | 195 | 105 | 2.20 | Often |
| 46 | Preserve food with chemicals | 60 | 130 | 150 | 150 | 2.20 | Often |
| 47 | Allow sick person(s) to prepare food. | 15 | 15 | 120 | 340 | 1.40 | Occasionally |
| 48 | Taste or dish out food with hand. | 20 | 30 | 90 | 350 | 1.43 | Occasionally |
| 49 | Expose prepared foods and cooking utensils | 5 | 20 | 105 | 360 | 1.33 | Occasionally |
| 50 | Cooking or cooling food inadequately | 25 | 65 | 155 | 245 | 1.73 | Occasionally |
| 51 | Sneezing or coughing while preparing and serving food. | 0 | 25 | 110 | 355 | 1.33 | Occasionally |
| 52 | Touching hair, face, nose when preparing food | 0 | 60 | 100 | 330 | 1.45 | Occasionally |
| 53 | Serving food on the same plate that previously held raw meat, fish without washing it. | 5 | 15 | 30 | 440 | 1.15 | Occasionally |
| 54 | Irregular check of refrigerator temperature | 60 | 70 | 170 | 190 | 2.00 | Often |
| 55 | Irregular washing of hands especially during food preparation. | 70 | 30 | 140 | 250 | 1.84 | Occasionally |
| 56 | Ensure proper food handling | 245 | 230 | 0 | 15 | 3.44 | Always |
| 77 | Search for and make use of information on food labels. | 225 | 202 | 40 | 20 | 3.30 | Always |
| 58 | Patronize ready-to-eat foods dispensers with utensils instead of hands. | 215 | 195 | 30 | 50 | 3.17 | Always |
| 59 | Food items should be well preserved especially against cockroaches, rodent, insects etc. | 375 | 95 | 20 | 0 | 3.72 | Always |
| 60 | Defrost food on kitchen counter | 80 | 230 | 90 | 90 | 2.61 | Often |
| 61 | Clean all utensils before using them to cook. | 365 | 120 | 5 | 0 | 3.73 | Always |
| 62 | Keep wash-up areas clean to avoid growth of microorganism | 310 | 175 | 5 | 0 | 3.62 | Always |
| 63 | Wash foods (including fruits and vegetables) before preparation and eating. | 400 | 80 | 5 | 5 | 3.78 | Always |
| 64 | Reheat leftover foods to appropriate temperature before serving. | 205 | 230 | 20 | 35 | 3.23 | Always |

Table 4: shows the mean response of respondents to food purchasing practices of female university workers. They responded occasionally to issues raised in items 41, 42, 43, 44, 47, 48, 49, 50, 51, 52 and 55. They claimed

often to the issues in items 45, 46, 54, 60. To items 56, 57, 58, 59, 61, 62, 63, and 64 their response was Always, as deduced from the limit of real numbers.

Research Questions Five

In what ways can household food safety practices of the female university workers be improved?

Table 5: Ways of improving household food safety practices

| S/N | ITEM | AL | OF | OCC | NE | \bar{X} | Remarks |
|-----|--|-----|-----|-----|-----|-----------|---------|
| 65 | Pay attention to expiry date during food purchase | 445 | 20 | 15 | 10 | 3.84 | Always |
| 66 | Eat foods soon after preparation | 255 | 85 | 115 | 35 | 3.14 | Always |
| 67 | Cooling food inside refrigerator with shallow containers. | 140 | 75 | 155 | 120 | 2.48 | Often |
| 68 | Not exposing prepared food to flies. | 280 | 35 | 10 | 165 | 2.88 | Often |
| 69 | Buy quality food stuffs from clean shops. | 410 | 45 | 25 | 10 | 3.74 | Always |
| 70 | Washing hands with water and soap especially after touching raw meat, fish, chicken. | 400 | 30 | 45 | 15 | 3.66 | Always |
| 71 | Avoid use of the same working surface and equipment/utensils for both raw and cooked food. | 40 | 275 | 65 | 110 | 2.68 | Often |
| 72 | Ensuring regular check up for refrigerator temperature. | 70 | 145 | 105 | 170 | 2.58 | Often |
| 73 | Ensuring that food is not exposed to personal sweat, sneezing and coughing. | 370 | 30 | 30 | 60 | 3.45 | Always |
| 74 | Washing plate with uncontaminated clean water. | 350 | 45 | 10 | 85 | 3.35 | Always |
| 75 | Cook foods including meat until well done. | 400 | 25 | 45 | 20 | 3.64 | Always |
| 76 | Thaw frozen foods inside refrigerator, microwave or running water. | 190 | 95 | 95 | 110 | 2.74 | Often |
| 77 | Do not prepare food when sick or have sick persons prepare food. | 205 | 60 | 125 | 100 | 2.76 | Often |
| 78 | Eat food in hygienically clean environment. | 425 | 40 | 15 | 10 | 3.80 | Always |
| 79 | Seek for information concerning food safety from health professional or health magazines and newspapers. | 275 | 70 | 105 | 40 | 3.18 | Always |
| 80 | Wash hands with water and soap immediately after touching meat/fish in the market or anywhere. | 180 | 205 | 55 | 50 | 3.05 | Always |
| 81 | Read articles on food safety practices | 215 | 210 | 40 | 25 | 3.26 | Always |
| 82 | Separate raw food from ready-to-eat or cooked food | 40 | 235 | 25 | 190 | 2.23 | Often |
| 83 | Wash hand with soap after using the toilet. | 360 | 115 | 5 | 10 | 3.68 | Always |
| 84 | Assess to clean water will help ensure food safety | 460 | 5 | 10 | 15 | 3.84 | Always |
| 85 | Tasting food to see if it is still good should be discouraged | 120 | 95 | 175 | 100 | 2.48 | Often |

Table 5: shows the mean response of respondents to ways of improving household food safety practices. They gave positive responses to all items, specifically Always to items 65, 66, 69, 70, 73, 74, 75, 78, 79, 80, 81, 83, and 84 and Often to items 67, 68, 71, 72, 76, 77, 82 and 85.

4. Discussion of the findings

Food is the major source of human exposure to pathogenic agents, from which no individual is spared. Thousands of people die every year as a result of food poisoning and hospitals are filled with more patients suffering from food and water borne diseases than from other causes of illness.

Although female university workers generally seem to have fair knowledge on household food safety issues, due probably to level of education, majority still have adequate knowledge about household food safety procedures. This can be seen from their mean ratings, purchasing preferences, food handling, preparation and preservation practices adopted in the home.

They agreed amongst many, that it is ok to thaw meat on the kitchen counter without realizing that harmful germs can multiply extremely rapidly at room temperature. Food therefore should be thawed safely in the refrigerator or in cold water or in the microwave.

Don't need to wash, fruits and veggies before peeling is wrong because it is easy to transfer bacteria from the peel or rind you are cutting to the inside of your fruits or vegetables. Leftovers are safe to eat until they smell bad is wrong because the kind of bacteria that cause food poisoning do not affect the look, smell or taste of food. The possibility of bacteria growth actually increases after cooking. The drop in temperature allows bacteria to thrive thus it is critical to warm cooked food to the right temperature before eating. Heat leftover thoroughly to at least 165% or throw food out before harmful bacteria grows on them.

Food borne illnesses are minor and temporary. Many do not seem to know that some food borne illnesses can lead to long term health conditions like kidney failure, chronic arthritis, brain and nerve damage and death.

Washing fruits and veggies with detergents will rid them of contaminants "soaps and detergents should not be used in washing the above. Their taste lingers in food and they are not fit for consumption. Wash them with clean running water and salt.

'Raw eggs are healthy and very nutritious.' Raw egg may contain salmonella or other harmful bacteria. Always cook egg thoroughly until the yoke and white are firm, not running. Avoid food or cookies containing raw or undercooked eggs.

Some of the items they disagreed will include "washing meat, poultry and sea food will get rid of bacteria-No it does not rid them of bacteria but rather increases chances of food poisoning by splashing juices or any bacteria they might contain into sinks or counter tops or other kitchen surfaces. To rid them of bacteria, make sure you cook them to the right temperature.

Female university workers attitude/perception on food safety as well as food purchasing practices are summarily positive. They realize that forgetting about or ignoring food safety measure is a recipe for disaster and act accordingly.

From their ratings on food handling and preparation practices, it is obvious that food safety standards are often compromised on long hours between preparation and eating; preserving food with chemicals, irregular check of refrigerator temperature and defrosting food on kitchen counter.

Food safety standards are compromised occasionally on hygiene, cooking or cooking food inadequately and not separating environment for cooked and uncooked food. On ways of improving household food safety practices, the workers opted for Always in all cases of hygiene, paying attention to expiration dates, eating food immediately after preparation, buying food based on quality and getting correct information with respect to food safety from health professional, magazines and newspapers. They choose often for item where they should insist on always like in separating working surfaces for cooked food and raw food; ensuring regular check up for refrigerator temperature, discouraging food preparation by sick persons, and tasting food to see if it is still good.

5. Conclusion

The outbreaks of food borne illnesses are primarily the result of ignorance manifesting in unsafe food handling practices. Female university workers should be made to view wrong practices as direct threat to health and helped to safeguard lives via sensitization/enlightenment programmes, workshops, seminars and conferences on food safety practices.

5.1 Recommendations

Female university workers are enjoined to:

- Maintain hygienic environment or asepsis to reduce food contamination risks.
- Maintain right temperature for freezing always keep fridge below 5⁰c. return salads and all food promptly to the fridge to keep them safe, fresh and tasty
- Use separate plates and surfaces for raw and cooked meat, poultry, sea food and all food.
- Always cook egg thoroughly i.e. until the yoke and white are firm not running.
- Throw leftover food out before harmful bacteria grows or reheat thoroughly.
- Defrost or marinate food safely inside refrigerator, inside cold water in the microwave.
- Keep raw meat, poultry etc in sealed containers so they do not touch or contaminate others.
- Take special care of food safety for infants and young children who are particularly vulnerable to food safety threat.
- Cook all food to appropriate temperature in order to kill microorganisms.

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